REMARKS

Favorable reconsideration is respectfully requested in view of the following remarks.

Claims 1, 2, 4, 5, 8, 9, 12 and 21-31 were pending in this application when last examined and stand rejected.

On page 4-8 of the Office Action, claims 1, 2, 4, 5, 8, 9, 12 and 21-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Greene et al. (The Journal of Biological Chemistry, 2003, Vol. 278, No. 9, pp 7617-623) in view of Zacharias et al., Madin et al., KSR International Co. v. Teleflex Inc. (550 U.S.--, 82 USPQ2d 1385 (2007)) and an evidentiary reference of Kimple et al. (Curr. Protoc. Protein Sci., 2004, Ch. 9, Unit 9.9).

In particular, the Examiner contends that Greene et al. teaches pre-clearing by contact with protein-A-sepharose beads, Zacharias et al. teaches a method of producing a protein via cell-free protein synthesis and purifying the protein of interest with Ni-NTA Magnetic Agarose Beads, and Madin teaches producing a protein in a cell-free wheat germ cell extract.

Applicants respectfully traverse this rejection. Initially, it is noted that Greene et al. disclose a pre-clear step that is technically different and not at all related to the method of the claimed invention. In Greene et al., a cell lysate is pre-cleared by incubation with rabbit anti-mouse antibodies followed by a protein-A-sepharose beads which are pre-blocked in 10% FBS. Thus, this step is performed to remove substances that bind to the rabbit anti-mouse antibody and not to remove substances that bind to the sepharose which has been blocked with FBS. Furthermore, after this pre-clear step, the lysate is then incubated with a primary antibody followed by incubation with rabbit anti-mouse antibody as the secondary antibody followed by blocked protein-A-sepharose beads. Thus, the pre-clear step in this reference is not directed towards a reduction in substances that bind to the affinity support or, as the result in the claimed method, an ultimate enhancement in recovery and purity of the protein of interest. Greene et al. fails to discuss such advantages of the claimed invention.

Furthermore, a pre-clear step is performed in the claimed invention before protein synthesis, which is followed by purification of the synthesized protein. That is, the cell extracts should maintain protein synthesis ability after the pre-clear step. There is a possibility that the protein synthesis ability of cell extracts might be impaired after the pre-clear step since the affinity support might absorb components that are indispensable for protein synthesis.

None of the other cited references in the rejection remedy this deficiency in Greene et al. No one of the cited references suggest removal of substances that may interfere with binding of a protein of interest to an affinity support by pre-treating a cell extract prior to synthesis with the affinity support which will then be used to purify the protein of interest. Furthermore, none of the cited references teach or suggest that such method can be performed without impairing the protein synthetic activity of the cell extract. Without such reasoning, a person of skill in the art would have no technical reason to modify Greene et al. from a method of pre-clearing substances that may bind with a secondary antibody to therefore obtain a clear analytic result in immunoprecipitation into a method wherein a cell extract is pre-cleared with an affinity support so that a protein of interest which binds to the affinity support can be efficiently synthesized and purified at a high purity level. The Examiner has provided no evidence that a person of skill in the art would expect the claimed method could be utilized to easily and efficiently synthesize and purify a protein of interest with the mere addition of a pre-clearing step.

Thus, for the above noted reasons, this rejection is untenable and should be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and early notice to that effect is hereby requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact the undersigned attorney at the telephone number below.

Respectfully submitted,

Yoshiko YOSHIYAMA et al.

/William R. Schmidt, II/
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By _____
William R. Schmidt, II
Registration No. 58,327
Attorney for Applicants

WRS/vah
Washington, D.C. 20005-1503
Telephone (202) 721-8200
Facsimile (202) 721-8250
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